Department of
Agriculture

Soil
Conservation
Service

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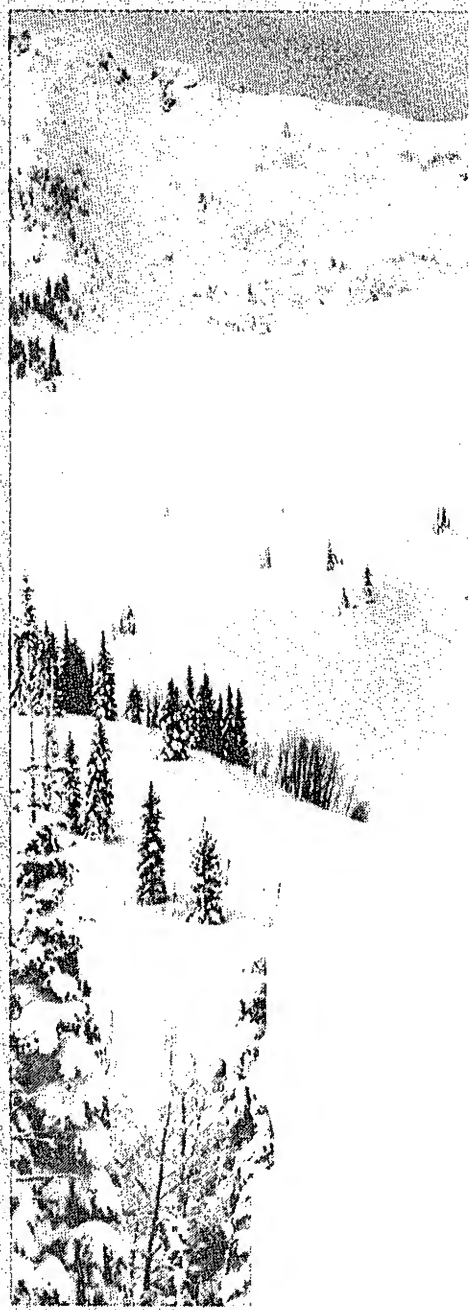

Foreward

How Forecasts Are Made

Most of the annual streamflow in the Western United States originates as snowfall. This snowfall accumulates high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are viewed in conjunction with snowpack data to prepare runoff forecasts. This report presents a comprehensive picture of water supply outlook conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data and narratives describing current conditions.

Streamflow forecasts are cooperatively generated by Soil Conservation Service and National Weather Service hydrologists. Forecasts become more accurate as more data affecting runoff becomes known. For this reason, forecasts are issued that reflect three future precipitation conditions — Below Normal, Average, and Above Normal. These forecasts are termed reasonable minimum, most probable, and reasonable maximum. Actual streamflow can be expected to fall between the lower and upper forecast values eight out of ten years.

Snowpack data are obtained by using a combination of manual and automated measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation, temperature, and other parameters are monitored on a daily basis and transmitted via radio telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

For More Information

Copies of Monthly Water Supply Outlook Reports and other reports may be obtained from the states listed below. Because of the limited space, snow survey measurements are not published in monthly reports. An annual snow survey data summary is published by the Soil Conservation Service for each of the western states. Historical snow survey data may be obtained at those same offices.

STATE	ADDRESS
Alaska	201 East 9th Ave., Suite 300, Anchorage, AK 99501-3687
Arizona	201 East Indianola, Suite 200, Phoenix, AZ 85012
Colorado (New Mexico)	2490 West 26th Ave., Denver, CO 80211
Idaho	304 North 8th Street, Room 345, Boise, ID 83702
Montana	10 East Babcock, Room 443, Federal Building, Bozeman, MT 59715
Nevada	1201 Terminal Way, Second Floor, Reno, NV 89502
Oregon	1220 Southwest 3rd Ave., 16th Floor, Portland, OR 97204
Utah	4402 Federal Building, 125 South State Street, Salt Lake City, UT 84147
Washington	360 U.S. Court House, Spokane, WA 99201
Wyoming	Federal Building, 100 East "B" Street, Casper, WY 82602

In addition to state reports, a Water Supply Outlook for the Western United States is published by the Soil Conservation Service and National Weather Service monthly, January through May. Reports may be obtained from the Soil Conservation Service, West National Technical Center, 511 Northwest Broadway, Room 547, Portland, OR 97209.

Published by other agencies:

Water Supply Outlook Reports prepared by other agencies include: California — Snow Survey Branch, California Department of Water Resources, P.O. Box 388, Sacramento, CA 98502; British Columbia — The Ministry of Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia, V8V 1X5; Yukon Territory — Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory, Y1A 3V1; Alberta, Saskatchewan, and N.W.T. — The Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W., Calgary, Alberta, T3C 1A6.

Nevada
Water Supply Outlook

and

Federal - State - Private
Cooperative Snow Surveys

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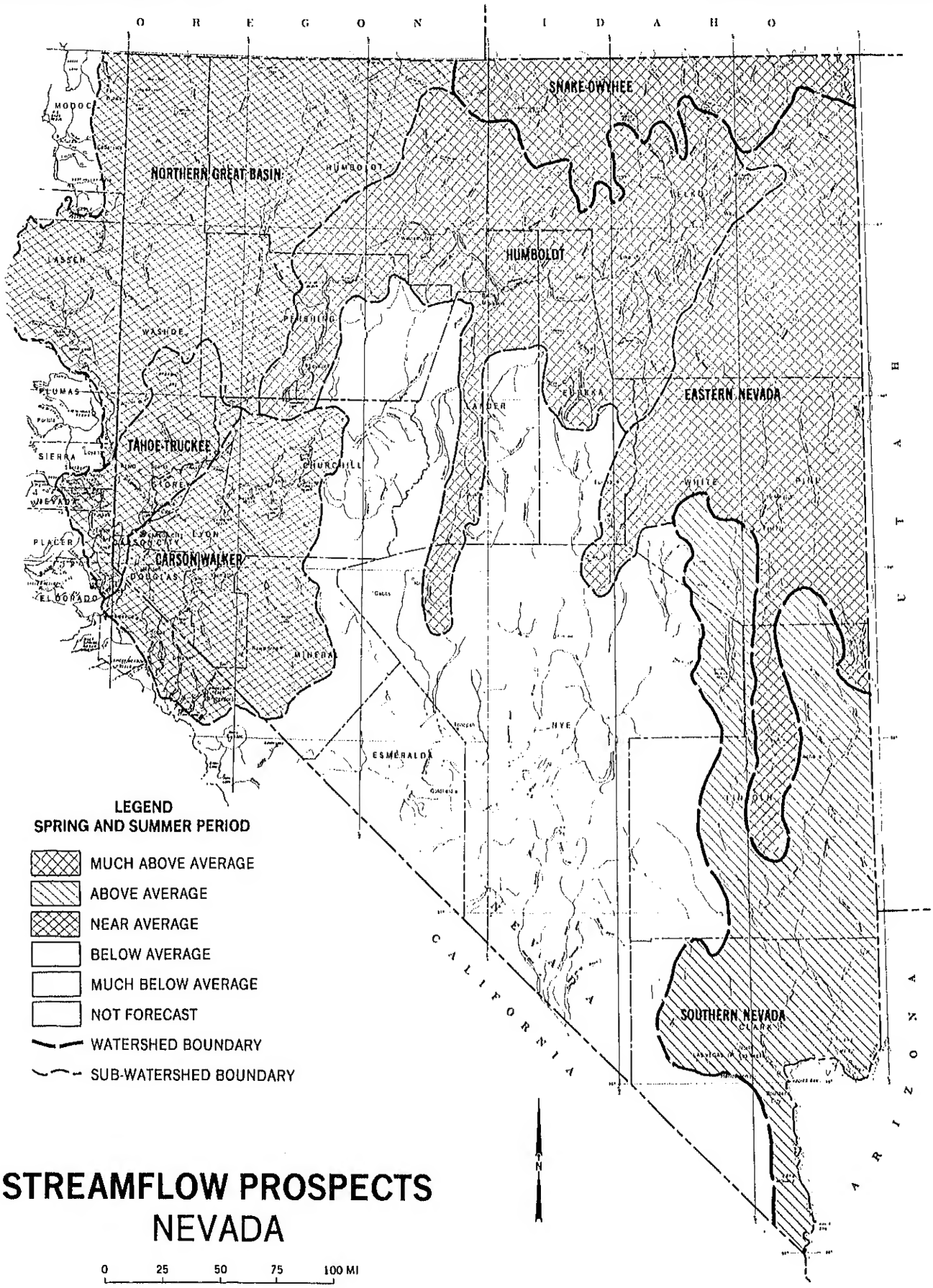
U.S. DEPARTMENT OF AGRICULTURE

SOIL CONSERVATION SERVICE



LEGEND
SPRING AND SUMMER PERIOD

- MUCH ABOVE AVERAGE
- ABOVE AVERAGE
- NEAR AVERAGE
- BELOW AVERAGE
- MUCH BELOW AVERAGE
- NOT FORECAST
- WATERSHED BOUNDARY
- SUB-WATERSHED BOUNDARY

STREAMFLOW PROSPECTS
NEVADA

0 25 50 75 100 MI

0 50 100 150 KM

SOURCE: Data compiled by SCS Field Personnel.

APRIL 1985 4-R-39131

USDA-SCS FORT WORTH, TEXAS 1985

GENERAL OUTLOOK

SUMMARY:

WESTERN NEVADA SNOWPACK ACCUMULATIONS ARE AVERAGE WHILE NORTHERN AND EASTERN NEVADA ARE SIGNIFICANTLY ABOVE AVERAGE. PRECIPITATION AT MOST SNOTEL SITES WAS BELOW AVERAGE FOR DECEMBER, BUT IS NEAR AVERAGE FOR THE WATER YEAR. RESERVOIR STORAGE IN THE SEVEN MONITORED RESERVOIRS AND LAKES IS NEAR AVERAGE.

SNOWPACK:

Snowpack conditions in the Tahoe, Truckee, Carson, and Walker basins are average as of January 1. Snow accumulations in northern and eastern Nevada are slightly above to significantly above average. The Snake Basin is 10-15 percent above January 1 averages while the Owyhee, Humboldt and Eastern Nevada basins are much above average. The Northern Nevada basin is approximately 10 percent above average.

PRECIPITATION:

December precipitation totals ranged from slightly below average to much above average. The Snake and Owyhee basins were near average for the month. Water year accumulations in the Tahoe-Truckee basin is near average while all other basins are above to much above average. The Northern Great and Humboldt basins are approximately 120 percent of January 1 averages. The Carson-Walker basin is 115 percent of average.

RESERVOIRS:

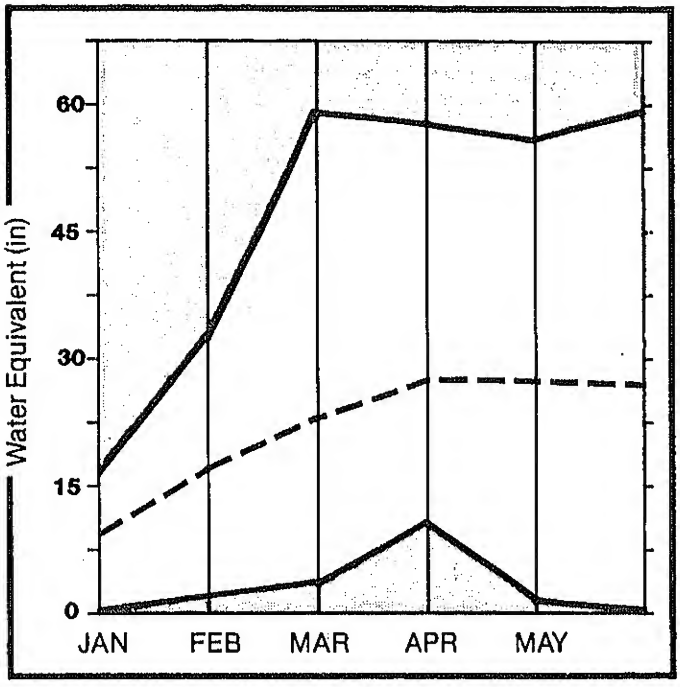
Water storage is good throughout the state. Storage facilities in the Tahoe-Truckee, Humboldt, and Snake-Owyhee basins are well above average for January 1. Storage in the Carson-Walker basin is approximately 15 percent below average. Total storage in the seven major lakes and reservoirs was 792,000 acre feet.

STREAMFLOW:

Streamflow forecast
slightly below aver
northern Nevada riv
average. Streamflo
percent below avera
City to 35 percent
River near Arthur, N

TAHOE & TRUCKEE BASINS

Mountain snowpack* (inches)

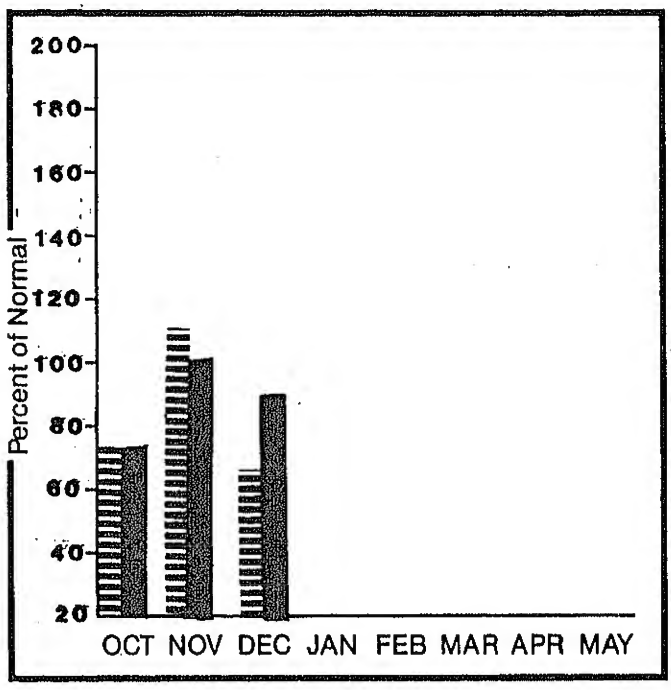


*Based on selected stations

Maximum ——— Average – – – –

Minimum ——— Current ———

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation ▯ Year to date precipitation ▮

WATER SUPPLY OUTLOOK:

Snowpack accumulations are near normal. This year's water content is approximately 10 percent below the values recorded last year. Reservoir storage is excellent with all storage facilities in the basin at or well above average. Storage in Boca, Prosser, and Stampede reservoirs is less than the amount stored last year at this date. Streamflow forecasts are average to slightly above average for Truckee River gaging stations.

For more information contact your local Soil Conservation Service office.

TAHOE & TRUCKEE BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
LAKE TAHOE RISE (assume gates closed	APR-HIG	1.3	1.4	100.0	215.8	0.0				
TRUCKEE RIVER at Farad, Ca	APR-JUL	269.0	265.0	98.0	181.4	19.7				
LITTLE TRUCKEE RIVER above Boca, Ca	APR-JUL	92.5	97.0	104.0	189.2	34.6				
PYRAMID LAKE RISE	OCT-HIG	1.0	-0.2		100.0	8.0				
STEAMBOAT CREEK at Steamboat, Nv	APR-JUL	5.2	4.8	92.0	173.1	19.2				
SAGEHEN CREEK, Ca	APR-JUL	6.5	6.2	95.0	184.6	15.4				
GALENA CREEK nr Steamboat, Nv	APR-JUL	4.4	4.3	97.0	181.8	22.7				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	xx USEABLE STORAGE xx THIS YEAR	LAST YEAR	AVE.
BOCA RESERVOIR	40.9	22.3	23.0	17.0
LAKE TAHOE	744.6	428.2	543.0	359.2
PROSSER RESERVOIR	28.6	9.5	9.0	7.5
STAMPEDE RESERVOIR	226.5	118.3	192.0	95.6

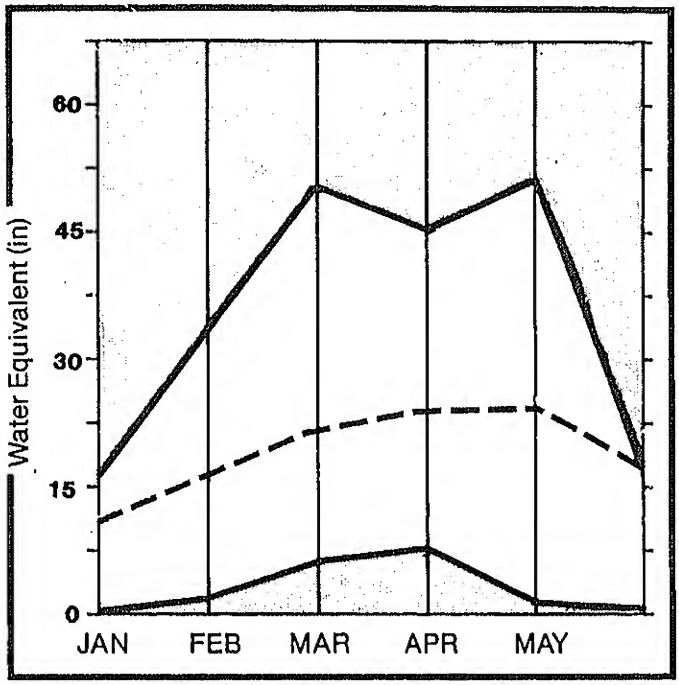
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
LAKE TAHOE RISE	8	93	107
TRUCKEE BASIN	8	102	108
LITTLE TRUCKEE RIVER	3	105	108
SAGE HEN CREEK	3	105	108
GALENA CREEK	3	99	104
STEAMBOAT DRAINAGE	2	98	98
PYRAMID LAKE	16	98	108

xCorrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

CARSON & WALKER BASINS

Mountain snowpack* (inches)

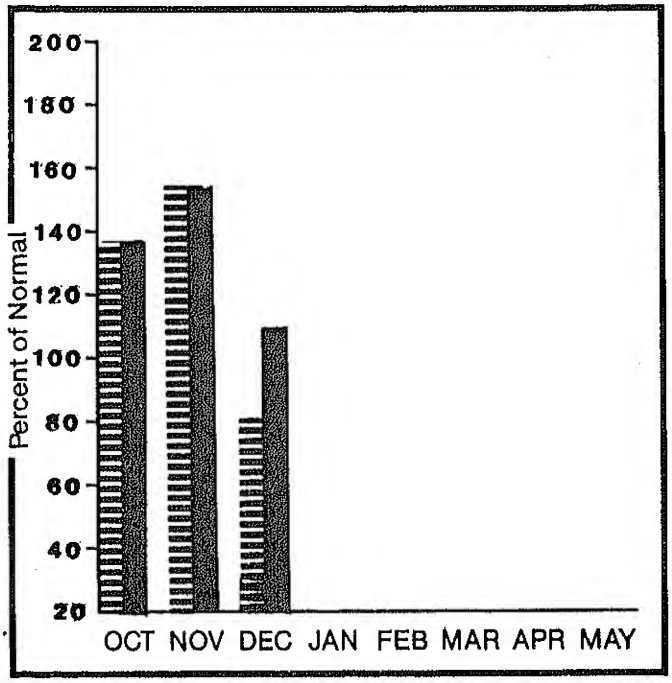


*Based on selected stations

Maximum _____ Average – – – –

Minimum _____ Current _____

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation

Year to date precipitat

WATER SUPPLY OUTLOOK:

Water content values are avera
Reservoir storag
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Walker drainage
Lahontan reserv
percent below a
reservoirs have
while Topaz Lak
Streamflow fore
average.

For more information
Conservation Service

CARSON & WALKER BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
E.F. CARSON RIVER near Gardnerville	APR-JUL	187.0	197.0	105.0	144.0	65.0	1846		200	JUN 21
W.F. CARSON RIVER at Woodfords, Ca	APR-JUL	53.0	54.0	101.0	139.6	66.0				
CARSON RIVER near Carson City, Nv	APR-JUL	182.0	186.0	102.0	172.0	32.4	1900			
CARSON RIVER near Ft. Churchill, Nv	APR-JUL	166.0	169.0	101.0	184.9	18.7	1837			
EAST WALKER RIVER near Bridgeport, C	APR-JUL	66.0	68.0	103.0	169.7	36.4				
WEST WALKER RIVER near Coleville, Ca	APR-JUL	148.0	155.0	104.0	157.4	52.0	1573			
WALKER LAKE RISE	OCT-MIG	1.0	-0.3		100.0	3.0				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	xx USEABLE STORAGE xx THIS YEAR	LAST YEAR	AVE.
BRIDGEPORT RESERVOIR	42.5	18.7	30.0	23.7
LAHONTAN RESERVOIR	295.1	145.5	148.0	165.6
TOPAZ RESERVOIR	59.4	20.6	13.0	26.9

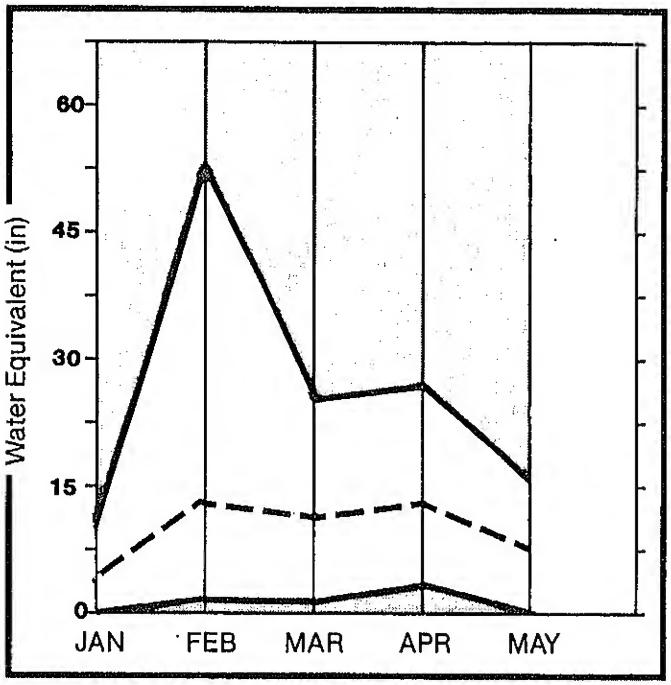
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
E. CARSON RIVER	5	74	102
W. CARSON RIVER	3	76	98
CARSON RIVER at Carson Ci	4	71	100
CARSON RIVER at Ft. Churc	4	71	100
E. WALKER RIVER nr Bridge	3	77	102
W. WALKER RIVER nr Colevi	4	84	101
WALKER LAKE RISE	4	84	101

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

HUMBOLDT BASIN

Mountain snowpack* (inches)

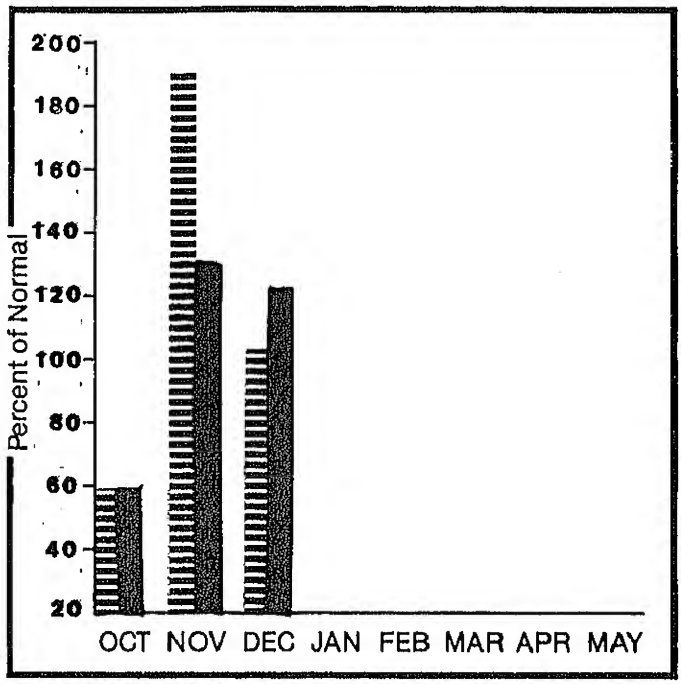


*Based on selected stations

Maximum ——— Average – – – –

Minimum ——— Current ———

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation ▥ Year to date precipitation ■

WATER SUPPLY OUTLOOK:

Snowpack accumulations are significantly above average for the fourth consecutive year. The January 1 snowpack is approximately 200 percent of average. Basin water year precipitation is above average by about 10 percent. Storage in Rye Patch Reservoir is approximately 30 percent above average for this date. Streamflow forecasts for the Humboldt River are 185 percent of average.

For more information contact your local Soil Conservation Service office.

SNAKE & OWYHEE BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
OWYHEE RIVER nr Gold Creek	APR-JUL	23.4	26.0	111.0	188.0	34.2				
OWYHEE RIVER nr Owyhee	APR-JUL	85.4	96.0	112.0	185.0	39.8				
S FORK OWYHEE nr White Rock, Nv	APR-JUL	83.0	90.0	108.0	181.9	34.9				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	xx USEABLE STORAGE xx THIS YEAR	LAST YEAR	AVE.
WILDHORSE RESERVOIR	71.5	38.2	60.0	26.6

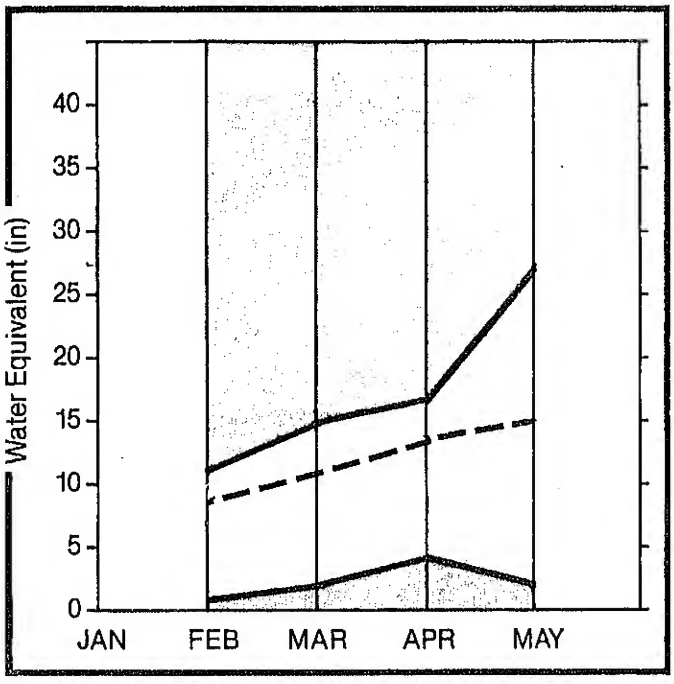
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
OWYHEE RIVER nr Owyhee	4	106	165
OWYHEE RIVER nr Gold Cree	1	166	166
S. FORK OWYHEE RIVER	4	106	165
SALMON FALLS CREEK	3	75	112

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

EASTERN NEVADA

Mountain snowpack* (inches)

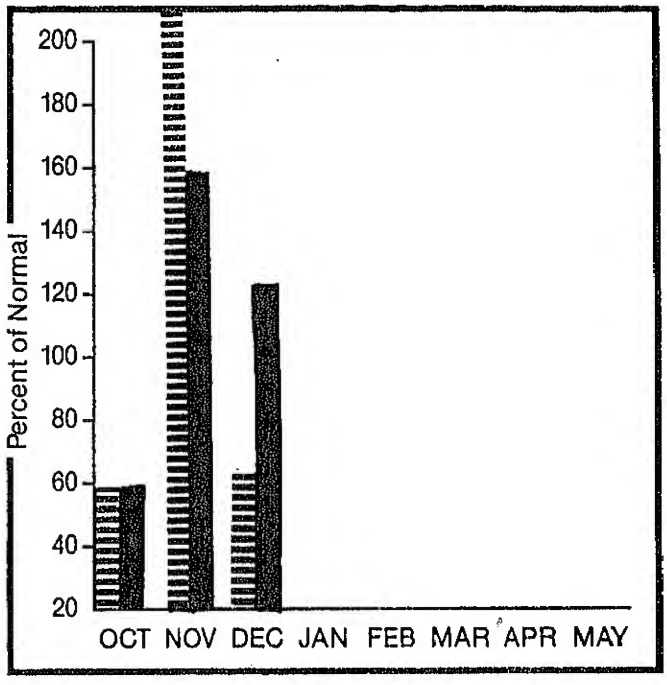


*Based on selected stations

Maximum ——— Average – – – –

Minimum ——— Current ———

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation

Year to date precipitation

WATER SUPPLY OUTLOOK:

Snowpack water content accumulation is well above average for January 1. The current water content is approximately equal to the amounts measured last year at this time. Streamflow forecasts for Steptoe Creek and Franklin River are above average by 20 percent and 35 percent respectively.

For more information contact your local Soil Conservation Service office.

EASTERN NEVADA

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	MEAS. MAX. (% AVE.)	MEAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
STEPTOE CREEK nr Elv	APR-JUL	2.0	2.4	119.0	200.0	50.0				
FRANKLIN RIVER nr Arthur	APR-JUL	5.9	8.0	135.0	220.3	50.8				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	xx USEABLE STORAGE xx THIS YEAR	LAST YEAR	AVE.

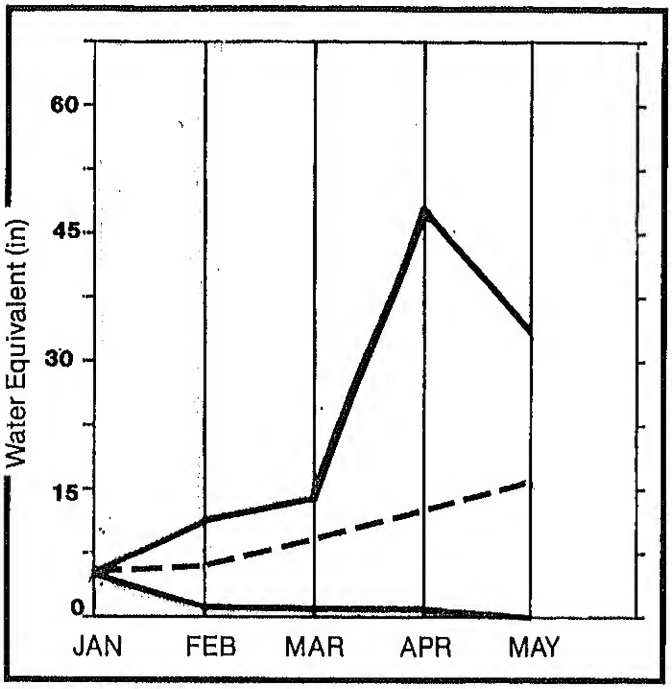
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
FRANKLIN RIVER	1	110	155
EASTERN NEVADA	1	88	182
STEPTOE VALLEY	0	0	0

xCorrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

NORTHERN GREAT BASIN

Mountain snowpack* (inches)

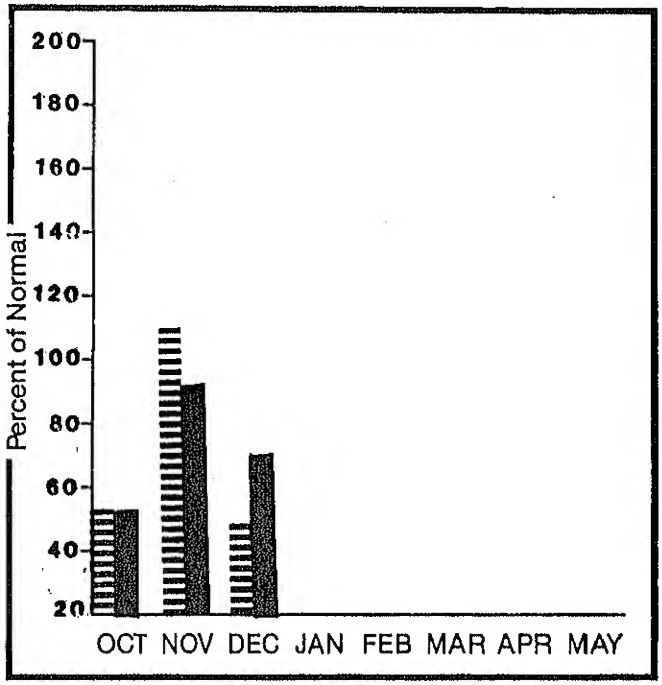


*Based on selected stations

Maximum ———— Average – – – –

Minimum ———— Current ————

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation ▥ Year to date precipitation ■

WATER SUPPLY OUTLOOK:

Snowpack accumul
Water content va
portions are bel
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water content va
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Fork Quinn River
approximately 15
forecast values
Creek are approx

For more information
Conservation Service

NORTHERN GREAT BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
BIDWELL CREEK nr Fort Bidwell	APR-JUL	12.0	11.3	94.0	175.0	16.7				
DEEP CREEK nr Cedarville, Ca	APR-JUL	3.6	3.2	88.0	166.7	0.0				
EAGLE CREEK nr Eagleville, Ca	APR-JUL	4.3	4.1	95.0	162.8	23.3				
HILL CREEK nr Cedarville, Ca	APR-JUL	4.1	3.8	92.0	170.7	24.4				
QUINN RIVER nr McDermitt, Nv	APR-JUL	16.0	16.8	105.0	175.0	37.5				
E. FORK QUINN RIVER nr McDermitt	APR-JUL	13.0	14.0	107.0	176.9	38.5				
MCDERMITT CREEK nr McDermitt	APR-JUL	12.0	14.0	116.0	183.3	50.0				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	xx USEABLE STORAGE xx THIS YEAR	LAST YEAR	AVE.

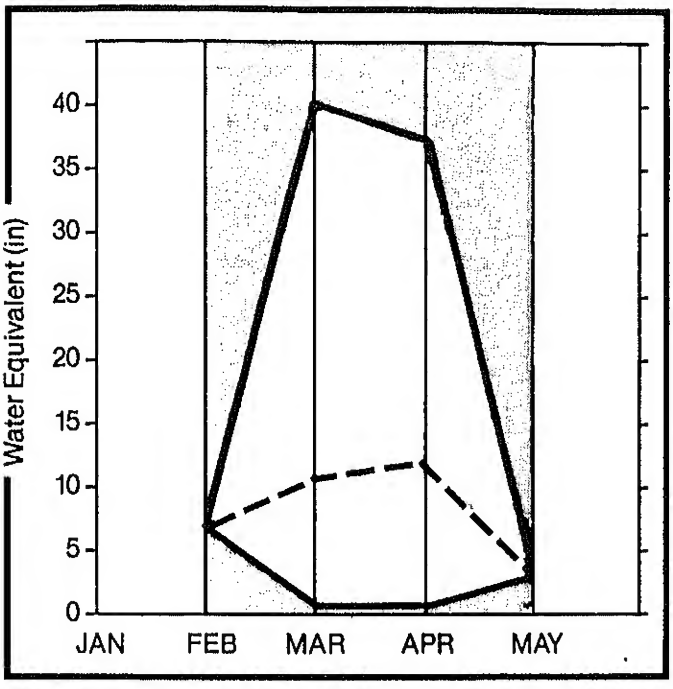
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
BIDWELL	1	47	70
HILL CREEK	1	47	70
DEEP CREEK	1	47	70
EAGLE CREEK	1	47	70
QUINN RIVER	2	69	116
E. FORK QUINN	2	69	116
McDERMITT CREEK	2	69	116

xCorrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

SOUTHERN NEVADA

Mountain snowpack* (Inches)

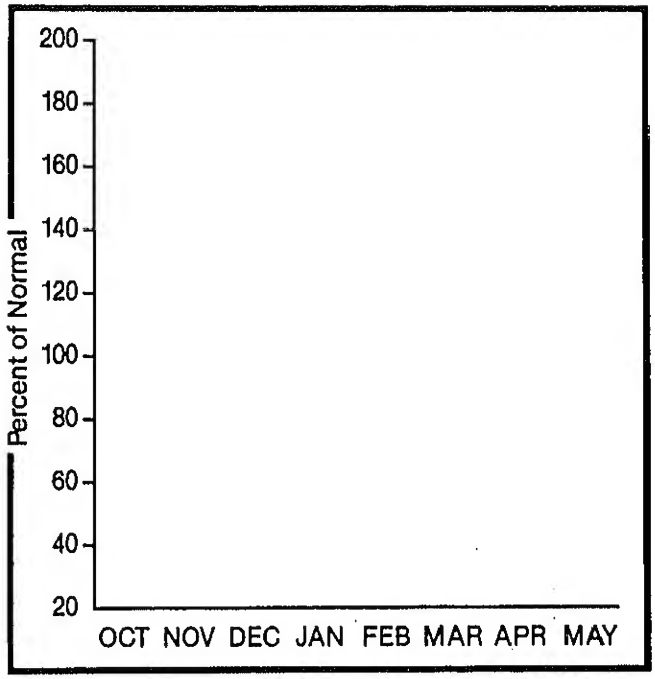


*Based on selected stations

Maximum _____ Average - - - -

Minimum _____ Current _____

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation ▯ Year to date precipitation ▮

WATER SUPPLY OUTLOOK:

Snowpack accumulations in the mountains supplying water for the Virgin River are approximately 15 percent above average for January 1. Storage in Lake Mohave is about 10 percent below average while storage in Lake Mead is about 30 percent above average. Both storage values are less than those recorded last year at this time. The streamflow forecast for the Virgin River near Hurricane, Utah is 85 percent above the 20 year average.

For more information contact your local Soil Conservation Service office.

SOUTHERN NEVADA

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	MEAS. MAX. (% AVE.)	MEAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
VIRGIN RIVER near Hurricane, UT	APR-JUL	48.0	90.0	187.0	252.1	145.8				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	xx USEABLE STORAGE xx THIS YEAR	LAST YEAR	AVE.
LAKE MOHAVE	1810.0	1422.0	1523.0	1605.0
LAKE MEAD	26159.0	23683.0	24070.0	18176.0

WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
VIRGIN RIVER at Littlefie	3	60	116
VIRGIN RIVER at Hurricane	3	60	116

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

The Following Organizations Cooperate With The Soil Conservation Service In Snow Survey Work

STATE

California Cooperative Snow Surveys
California Department of Parks and Recreation
California Department of Water Resources
Colorado River Commission of Nevada
Idaho Cooperative Snow Surveys
Nevada Association of Conservation Districts
Nevada Department of Conservation & Natural Resources
- Division of Water Resources
- Nevada State Forester
- Division of Conservation Districts

Oregon Cooperative Snow Surveys
University of Nevada, Desert Research Institute
Utah Cooperative Snow Surveys

FEDERAL

Bureau of Reclamation
Forest Service
Geological Survey
Soil Conservation Service
U.S. District Court - Federal Water Master
NOAA, National Weather Service

PRIVATE

Nevada Irrigation District
Owyhee Project North Board of Control
Owyhee Project South Board of Control
Pacific Gas and Electric Company
Pershing County Water Conservation District
Sierra Pacific Power Company
Truckee - Carson Irrigation District
Walker River Irrigation District
Washoe County Water Conservancy District

Other organizations and individuals furnish valuable information for the snow survey reports. Their cooperation is gratefully acknowledged.